A neural network-based model to learn agent's utility function

ABSTRACT

Learning opponentsô preferences has a great impact on the success of negotiation, specially, when there is partial information about opponents. This incomplete information can be effectively utilized by intelligent agents equipped with adaptive capacities to learn opponentsô preferences during negotiation. This paper present a neural network based model, named ANUE, to estimate negotiatorsô utility function. ANUEôs structure is inspired from mathematical interpretation of utility function. We have also presented eight test cases to evaluate ANUEôs performance where test cases cover all possible form of incomplete information concerning utility function. As a future work, we evaluate ANUE with proposed test cases.